A SYSTEM FOR PACKING AND SEALING A DATA MEDIUM COVER

The present invention relates to a novel technique of packaging and sealing a data medium cover such as a CD, CD-ROM, DVD or VHS videocassette cover within a package.

In general the present invention constitutes a refinement and simplification of the packaging and sealing technique described in applicants published international patent application, application no. PCT/DK00/00053, publication no. WO 00/47495, to which published international patent application reference is made.

As stated in the above-mentioned international patent application, a multi-panel package for packaging and sealing a data medium cover is disclosed in Danish design registration no. MR1998 00856 published on 31 July 1998. Further in the above-mentioned published international patent application a technique of using a multi-panel package for packaging and sealing a data medium cover, in particular a CD cover within the package is described which technique involves the use of a label configurated as a annular part continuing into an adhesive carrying label flap which is used by positioning the annular part round the central CD carrying projection of the CD cover and fixating the outwardly protruding adhesive carrying flap to the outer surface of the package. Although this technique has proven to be successful and reliable and provides the intentional sealing of the package preventing a person from removing the CD cover from a package without braking the seal established by the label, this technique is still open for refinements and in particular simplification as is taught by the present invention.

It is an object of the present invention to refine the packaging and sealing technique known from the above-mentioned published international patent application through the use of a more simple label structure.

The above object together with numerous other objects, features and advantages which will be evident from the below detailed description of presently preferred embodiments of the technique according to the present invention is in accordance

with the first aspect of the present invention obtained by means of a system for packing and sealing a data medium cover, comprising a collapsible package comprising opposite front and rear panels being substantially coextensive with the major surfaces of said data medium cover for sandwiching said data medium cover therebetween, and two end walls interconnecting said front and rear walls for defining in an uncollapsed state a sleeve for receiving said data medium cover through an open end of said sleeve, said front panel of said collapsible package having at said open end an adhesive contacting area, and a sealing label having on its one surface an adhesive coating for permanently adhering to said adhesive contacting area of said front panel of said collapsible package for permanently adhering thereto and for releasable adhering to said data medium cover, said sealing label having a length allowing said sealing label to extend from said adhesive contacting area of said front panel of said collapsible package round an exposed end wall of said data medium cover and along the one surface of said data medium cover being positioned juxtaposed said rear panel of said collapsible package when said data medium cover being received within said collapsible package in said uncollapsed stage for contacting said one surface of said data medium cover and adhering thereto at a position hidden behind said rear panel of said collapsible package.

In the system for packaging and sealing a data medium cover according to the first aspect of the present invention, the sealing label may be simply established by a piece of adhesive tape provided the sealing label is of a sufficient length for fulfilling the above requirements as to fixation of the label to the data medium cover and further provided that the adhesive of the adhesive tape fulfils the requirements as to affinity relative to the adhesive contacting area of the front panel of the collapsible package and releasable fixation to the data medium cover concealed within the sleeve. In general, the terms front and rear panels as used in the present specification only serve the purpose of defining the orientation of the package in relation to the initial state of introducing the data medium cover into the sleeve rather than specific terms referring to orientation of use, storage, etc, of the package and/or the data medium cover. In general, the panels constituted by the front and

rear panels may arbitrarily be substituted by one another without deviating from the scope of the present invention.

According to alternative embodiments of the system according to the first aspect of the present invention, the technique of exposing the data medium cover as described in the above-mentioned published international patent application is further accomplished by providing the front and/or the rear panel with through-going perforations defining a central area for the exposure of a substantial part of the data medium cover received within the package through removal of the central area along the through-going perforation. Alternatively or additionally, an aperture may be provided in the front and/or the rear panel for providing access to the data medium cover and further for allowing according to an alternative aspect of the present invention fixation of the data medium cover relative to the apertured panel by means of one or more additional sealing labels.

Whereas the collapsible package of the system according to the first aspect of the present invention basically constitutes a sleeve for receiving the data medium cover, exclusively, the package may according to an alternative embodiment and as disclosed in the above-mentioned published international patent application comprise one or more additional panels being substantially coextensive with the front and/or rear panels and being connected with the front and/or rear panels through hinge parts for the provisions of one or more cover panels collapsible in contact with the front and/or the rear panels. Basically the additional panels may constitute wing or leaves for allowing a package to be closed like a book or similar collapsible structure.

According to a particular feature of the present invention, the sealing label is for providing a temper proof structure provided with a plurality of through-going cuts providing the feature that the sealing label disintegrates provided an attempt of removal of the sealing label from the adhesion to the front panel be made. The through-going cuts may be of any appropriate configuration such as a radial pattern, a zigzag pattern or parallel cuts from one or both edges of the sealing label being of a substantial rectangular configuration.

The collapsible package of the system according to the first aspect of the present invention may be made from any appropriate material including plastics materials, cardboard material and aluminium foil and/or combinations thereof, however, according to the presently preferred embodiment of the system according to the first aspect of the present invention, the collapsible package is made from cardboard and said sealing label being constituted by an adhesive tape having a supporting plastics foil and said adhesive coating being applied to the one face thereof.

The above object together with numerous other objects, features and advantages which should be evident from the below detailed description of presently preferred embodiments of the present invention are according to a second aspect of the present invention obtained by means of a system for packing and sealing a data medium cover, comprising a collapsible package comprising a collapsible package comprising opposite front and rear panels being substantially coextensive with the major surfaces of said data medium cover for sandwiching said data medium cover therebetween, and two end walls interconnecting said front and rear walls for defining in an uncollapsed state a sleeve for receiving said data medium cover through an open end of said sleeve, at least one of said front and rear panels having a central aperture defined by a cut line through said panel for exposing a wall of a data medium cover received within said sleeve and exposed within a circumferential rim part of said wall, said panel of said collapsible package having at said rim part adjacent to said window at least one adhesive contacting area, and a sealing label having on its one surface an adhesive coating for permanently adhering to said adhesive contacting area for permanently adhering thereto and for releasable adhering to said data medium cover exposed within said window.

The system according to the second aspect of the present invention utilises the possibility of fixating the data medium cover in its packed and sealed state within the sleeve by means of one or more sealing labels to be applied along the rim part of the front or rear panel. The system according to the second aspect of the present invention may according to advantageous embodiments be embodied in accordance with the system according to the first aspect of the present invention and in general

the two systems according to the first and second aspects of the present invention may readily be combined into a single system.

The present invention is now to be further described with reference to the drawings in which

Fig. 1 is a planar, elevational and schematic view of a first embodiment of a package for packaging and sealing a CD cover,

Figs. 1a and 1b are top views of the package further including the CD cover and a sealing label,

Figs. 2 is a perspective and schematic view of an alternative usage of the package shown in Fig. 1 for sealing the CD cover within the package,

Figs. 2a and 2b are detailed planar views of alternative embodiments of the sealing label,

Fig. 3 is a planar and elevational view of the blank from which the package shown in Fig. 1 is produced,

Figs. 4a, 4b, 4c and 4d are views similar to the views of Fig. 1, Fig. 1a, Fig. 3 and 2, respectively, of an alternative embodiment of the package

Figs. 5a, 5b, and 5c are views similar to the views of Figs. 1, 1a and 1b, respectively, illustrating a further embodiment of the package, and

Fig. 6 is a planar, elevational view similar to the view of Fig. 1 illustrating the use of the embodiment of the package shown in Fig. 4a-4d according to the alternative technique shown in Fig. 2.

The present packaging and sealing technique constitutes a refinement and simplification of the packaging and sealing technique described in applicant's published international patent application no. PCT/DK00/00053, publication no. WO 00/47495 to which reference is made and in which a number of embodiments or packages is illustrated, in particular in Figs. 3, 4, 4a, 5, 6 and 7 of the published international patent application. Reference is made to the above published international patent application and in particular the description referring to the above mentioned figures.

In Fig. 1, a first embodiment of a package for use in accordance with the packaging and sealing technique according to the present invention is shown. The package is in its entirety designated the reference numeral 10 and comprises a sleeve 12 for receiving and enclosing a data medium cover in particular a CD cover in an inner compartment defined within the sleeve. The sleeve is in greater details defined by opposite front and rear panels 14 and 16 which are interconnected by opposite side walls one of which is illustrated in Fig. 1a and designated the reference numeral 18. In the front panel 12, a through-going perforation 20 is provided defining an area which is exposable through the removal of the central area defined within the through-going perforation 20 for exposing the information presented on the CD cover received within the sleeve. The technique of exposing the CD cover is described in greater details in the above-mentioned published international patent application. The package is further provided with two additional panels 22 and 24, the panel 22 being connected to the rear panel 16 of the sleeve 12 through a hinged connection part 21 whereas the panel 24 is connected to the panel 22 through a hinge part 23 similar to the hinge part 21. Furthermore, the rear panel 16 may as described below with reference to Fig. 2 be provided with a central aperture or window. In general, the front and rear panels may by constituted by solid panels, apertured panels or perforated panels or combinations of the above.

The panel 24 is further provided with a minor flap 26 for co-operating with a slit provided in the junction between the hinged connection part 21 and the rear panel 16 as is also described in greater details in the above-mentioned published international patent application.

The sleeve 12 constitutes and open end sleeve in which the CD cover is introduced from the one end, namely from a position lying on top of the panel 22 as is illustrated in greater details in Fig. 1a.

Alternatively, as illustrated in Fig. 1b, the CD may be introduced from the other or opposite end of the sleeve 12.

In accordance with the teaching of the present invention, the front panel 14 is provided with a location or area 30 which exhibits a high affinity to an adhesive material applied to an adhesive label 32 which is mounted on the CD cover 28 which is to be packaged within and sealed within the package 10. The label 32 is, as is illustrated in Fig. 1a, applied to the rear side of the CD cover 28 extending round the free exposed end of the CD cover and is then after the CD cover has been shifted into the interior of the sleeve 12 pressed into contact with the area 30 exhibiting a high affinity to the adhesive of the label 32. It is to be realised that the high affinity of the area or location 30 may be present on the entire surface of the front panel 14, however in some applications, the front panel 14 is provided with an illustration or covering which prevents the label from adhering to the front panel, therefore, the dedicated adhesion fixation area 30 is provided.

In general, it is to be realised that the package according to the present invention may be modified by substituting the front panel with the rear panel and vice versa and in doing so shifting the location of the area exhibiting the high affinity to the adhesive material from the front panel to the rear panel.

In Fig. 2, an alternative technique of using of the label 32 is illustrated, in which application a multiplicity of labels is used. In Fig. 2, the entire package is turned around presenting the rear panel 16 to the viewer after the sleeve 12 is bent along the hinge line defined in the junction between the hinged part 21 and the rear panel 16 and also the additional panel 22. In Fig. 2, a central aperture is defined by a cut line 17 in the rear panel 16 providing a window in the rear panel 16. The CD cover received within the sleeve 12 is fixated relative to the circumferential remaining rim part of the rear panel 16 by means of a plurality of labels 32. In addition, two labels 32 are fixated round the open outer end of the sleeve 12.

The label 32 may be constituted by any appropriate adhesive tape conventionally used within the industry exhibiting a high affinity to the material of the package 10 which is preferably made from cardboard. The adhesive of the label is chosen for establishing a permanent seal between the label and the adhesive location area 30 of the front panel 14 of the package 10 and is further chosen or selected for

establishing a non-permanent, however, highly stable sealing to the material of the CD cover. Within the industry, a multiplicity of solvent based and water based adhesives are well known and commonly used in the industry for stickers or labels commonly applied to CD covers or similar covers or devices. However, according to a particular aspect of the present invention, the label 32 is dedicated for the purpose of establishing the intentional temper proof sealing of the CD cover within the sleeve 12 and is, as is illustrated in Fig. 2a, provided with a plurality of through-going slits of a radial pattern or alternatively in a zigzag pattern providing the advantageous feature of insuring that the label disintegrates provided it is attempted to remove the label from its fixture to the area 30 of the front panel 14.

In Fig. 2b, an alternative embodiment of the label to be used in combination with the sleeve 10 according to the present invention is shown designating the reference numeral 32'. The label 32' differs from the above described label 32 in that the label 32' is composed of three parts, a first part 32a provided with an adhesive material exhibiting high affinity to the plastics material of the CD cover, a second part 32b being uncovered and providing a non-adhering intermediate part and finally a third part 32b for contacting with and adhering to the sleeve 32 and therefore being provided with an adhesive material or adhesive coating exhibiting high affinity to the area 30 of the front panel 14. The part 32a defines, as is evident from Fig. 2b, a width which is approximately twice the width of each of the second and the third parts and consequently in total constitutes approximately one half of the width or length of the entire label 32'.

In Fig. 3, the blank from which the erected and uncollapsed package 10 shown in Fig. 1 is illustrated in greater details illustrating the generally L-shaped blank defining the rear panel 16 having its central aperture defined by the through-going cut 17, the front panel 14 provided with the through-going perforation 20 and the two additional panels 22 and 23, and further a flap 19 extending from the rear panel 16 and serving the purpose of establishing in co-operation with the front panel 14 the open end sleeve 12 illustrated in Figs. 1 and 1a.

In Figs. 4a, 4b, 4c and 4d, a modified version of the package is shown designated the reference numeral 10' in its entirety. In the present specification, a component or an element identical to a previously described component or element is designated the same integer as used previously whereas a component or an element serving the same purpose as the previously described component or element respectively, however different in configuration or material from the previously described component or element is designated the same integer however added a marking. In Figs. 4a, the modified version of the package 10' is illustrated comprising a single panel 22 whereas the panel 24 shown in Figs. 1, 1a and 3 is substituted by a flap 24'.

As stated above, the present invention also allows the package to be modified by shifting the front panel with the rear panel and vice versa, and in the embodiment shown in Fig. 4c, the through-going cut 17 may be shifted from the rear panel 16 to the front panel 14 and the through-going perforation 20 may be shifted from the front panel 14 to the rear panel 16. Furthermore, as illustrated in Fig. 1c, the CD cover 10 may as an alternative to the use shown in Fig. 4b be introduced from the opposite or rear end of the package which alternative use is not illustrated in the separate illustration, however, readily deducible from the combination of Figs. 4b and 1c.

In Figs. 5a, 5b and 5c, a further embodiment of the package according to the present invention is shown differing from the above-described embodiments in that the package includes no panels such as the panels 22 and 23 shown in Fig. 3. The further embodiment of the package according to the present invention shown in Figs. 5a, 5b and 5c allows the CD cover to be introduced into the interior of the package from either end of the package as discussed above with reference to Figs. 1, 1a and 1b.

In Fig. 6, the use of the alternative embodiment of the package 10' shown in Figs. 4a-4d according to the technique illustrated in Fig. 2 is illustrated.

Although the present invention has above been described with reference to distinct and presently preferred embodiments including additional panels designated the

reference numerals 22 and 24, it is to be understood that the present invention is in general to be construed as defined in the appending claim. In particular, the present invention may be embodied as a sleeve comprising the front and rear panels together with the side walls exclusively, i.e. omitting the above described panels provided the complete enclosing of the sleeve and also the CD cover received therein. It is further contemplated that the present invention may be embodied in numerous geometrical configurations for complying with a specific data-carrying medium or alternatively an analogue signal-carrying medium such as a VHS, a BETAMAX, a CC or CDC cassette or any other signal or data-carrying medium, including CD, CD-ROMs, DVDs.

In the enclosed Danish language application instructing the use of the presently preferred embodiment of the package and label according to the present invention is described and shown.